

LAB – TEST LABORATORIUM S.C.
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AB 815

TEST REPORT NR DZ/42/08/20 CONTAINS 3 NUMBERED PAGES

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Evaluation of activity according to PN-EN 13624:2013-12

A. Laboratory:

LAB – TEST LABORATORIUM S.C. 40-868 KATOWICE, ul. Piastów 6; Poland

B. Identification of the sample:

1. Product tested..... **Zoono ® Hand Sanitiser and Protectant**

2. Batch..... 364464

3. Test sponsor..... Zoono Holdings Ltd

4. Date of delivery..... 30.07.2020

5. Storage conditions..... ambient

6. Active substances:

alkyl (C12-16) dimethylbenzyl ammonium chloride (ADBAC/BKC(C12-16))

7. Product diluent recommended by the manufacturer..... product to be used as is

C.1. Test method..... dilution - neutralization

2. Neutralizer:

Tween 80, 100 g/l; lecithin 30 g/l; L-histidine 1 g/l; sodium thiosulphate 5 g/l; phosphate buffer 10 ml/l

Plated on MEA + tween 80, 5 g/l + lecithin, 7 g/l

D. Test conditions:

1. Test period..... 30.07 – 17.08.2020

2. Product diluent in the test..... distilled water

3. Concentrations tested 1% - 97% v/v

4. Appearance of product dilutions..... clear

5. Interfering substance..... 0,3 g/l bovine albumin

6. Test temperature..... 20,0°C ± 1,0°C

7. Contact time. 60 s ± 5 s

8. Incubation..... 30,0°C ± 1,0°C, 48h; pour plate method

9. Microbial strains in the test:

Candida albicans ATCC 10231

E. Test results..... table 1.

F. Conclusion: see page 3

TABLE 1

Product: Zoono ® Hand Sanitiser and Protectant

Sponsor: Zoono Holdings Ltd

test according to PN-EN 13624:2013-12

interfering substance: 0,03% bovine albumin; test temp. 20,0°C ± 1,0°C; contact time: 60 s

Test strain	validation test				Microbial suspension in the test	test procedure for product concentration % v/v				
	test suspension	test conditions	neutralizer toxicity control	dilution-neutralization control		1%		10%		97%
Candida albicans ATCC 10231	Vc: 10^{-2} : 65;78 Nv ₀ : $7,2 \cdot 10^1$ Nv _B : $7,2 \cdot 10^4$	Vc: 56;59 A: $5,8 \cdot 10^1$	Vc: 10^{-2} : 71;81 B: $7,6 \cdot 10^3$	Vc: 45;53 C: $4,9 \cdot 10^1$	10^{-6} : 266;291 10^{-7} : 32;35 N: $2,8 \cdot 10^8$ N ₀ : $2,8 \cdot 10^6$ lg N ₀ =6,45	Vc	10^0 : >330;>330	10^0 : >330;>330	10^0 : 0;0	
						10^{-1} :	>330;>330	10^{-1} : >330;>330	10^{-1} : 0;0	
						Na	> 33000	> 33000	< 140	
						Ig Na	> 4,52	> 4,52	< 2,15	
						R	< 1,93	< 1,93	> 4,30	

Vc – viable count

N – cfu/ml in the test suspension, N₀= N/100Nv - cfu/ml in the suspension in validation procedure, Nv₀= Nv/100 = Nv_B/1000Nv_B - cfu/ml in the validation suspension for control B,

R – reduction factor of viable counts

Na - cfu/ml in the test mixture

A - cfu/ml in the experimental conditions control test

B - cfu/ml in neutralizer control test

C - cfu/ml in the dilution-neutralization control test (for 97% dilution)

Validation criteria verification:

$1,5 \cdot 10^6 \leq N_0 \leq 5,0 \cdot 10^6$	-	met
$3,0 \cdot 10^1 \leq N_{v0} \leq 1,6 \cdot 10^2$	-	met

$3,0 \cdot 10^4 \leq N_{vB} \leq 1,6 \cdot 10^5$	-	met
A, C $\geq 0,5 N_{v0}$	-	met

B $\geq 0,05 N_B$ - metMethod modifications: noneMethod deviations: none

F. Conclusion:

Product: **Zoono ® Hand Sanitiser and Protectant**

tested according to **PN-EN 13624:2013-12**, at clean conditions (0,3 g/l bovine albumin), test temperature $20,0^{\circ}\text{C} \pm 1,0^{\circ}\text{C}$, contact time 60 s, diluted in distilled water, is active (necessary reduction 4 log) against:

Candida albicans ATCC 10231 at 97%,v/v

Authorized by: Laboratory Manager.....date.....